Plastic Disaster
Imprint

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Future WAZA Conferences

2020:  San Diego Zoo, San Diego, USA
2021:  Moscow Zoo, Moscow, Russia
2022:  Loro Parque, Tenerife, Canary Islands

Cover photo:
Hawaiian monk seal caught in fishing tackle off Kure Atoll, Pacific Ocean. The seal was subsequently freed and released by the photographer. © Michael Pitts / NaturePL

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When WAZA announced agreements at the 72nd Conference in Berlin that would compel at least half our members to eliminate single-use plastic from their supply chains and commit to using only products that included certified sustainable palm oil products by 2023, there was an air of uncertainty in the room.

Too ambitious, said some. Too soon, said others. The zoo and aquarium community doesn’t move that fast, we were told, and five years passes quicker than you think.

Now, just one year after signing those Memorandums of Understanding with United Nations Environment and the Roundtable on Sustainable Palm Oil, I am wondering if we weren’t being too cautious. Many members of the WAZA community are already well down the line addressing issues such as marine litter and plastics and sustainable palm oil, while others are building net-zero-energy facilities, recycling water and converting to solar power. In so doing, they have laid out a road map for WAZA and its members to follow towards 2023.

This WAZA News focuses on sustainability in all its forms, and highlights the good work done by leading zoos and aquariums around the world. The Sustainable Development Goals (SDGs) that were launched by the United Nations in 2016 offer a global framework that commits the world to some hard targets by 2030, a challenging but necessary pathway designed to “end poverty, protect the planet and ensure prosperity for all”. Now it’s up to WAZA and its members to find areas of strength and focus in the SDGs, and take up leadership positions in this movement.

Some of the SDGs might seem an easy fit for the WAZA community, such as those that address issues of conservation on land or under water, or partnerships or even climate change. But what about sustainable cities? Innovative infrastructure? Gender equality? Education? Can WAZA and its members stretch far enough to lead there too?

I believe that we can. Sustainability is not a choice but a commitment, and it’s clear from the remarkable achievements of zoos and aquariums around the world that we are already well on our way.
We live on an improbably beautiful planet, teeming with extraordinary life.

The joy of working in aquariums and zoos is that we get to know the full diversity of life, at an individual level. When you think and work at a scale of ecosystems and herds, it is easy to feel disconnected from the environment. But when you get up close to animals, a bit of magic happens. You get to see the individual animal, with their unique traits and personality, the features that make a fish different from a snake or a rhino.

When you get really close to a rhinoceros, the first thing that strikes you is the texture of their skin, thick and rutted, almost prehistoric. Yet, they have silky, soft skin behind their ears and on their inner thighs. If you scratch behind their ears, they lean in and rumble with pleasure. The tips of their ears are covered in coarse hairs, and their ears twitch when you talk. Rhinoceroses move carefully; each step is deliberate and gentle. When they sneeze, they blow out snot and bits of straw. Their heads are heavy and ideal for eating heaps of grass. Babies romp and skip, but after a few years gravity slows them down. They defecate in middens, providing food and shelter for many other animals.

Every rhinoceros is so much more than a horn. They are mothers and fathers, they have friends and families. They roll in mud and create dust clouds when they run. They open up grasslands and knock down trees, gently and continuously shaping the environment. When you get close to a rhinoceros, you can appreciate the entire animal, and it is just inconceivable that you would harm such a magnificent creature.

But, for many people, rhinoceroses are just a horn; and our work is to reverse these perceptions. By putting people close to animals, we create bonds and connections. The sustainability of the extraordinary life on our fragile planet depends on deepening our understanding of threats and empowering behaviour change.

As aquariums and zoos, we must be brave and tackle global issues, such as palm oil, marine litter and recycling. We must also be brave to tackle local issues, such as the power we consume and the plastic in our supply chain. Around the world, our WAZA members are engaging their communities in the wonder of animals and sharing the steps we need to take to reduce the risk of extinction in the future.

I hope you enjoy these brave stories of hope and change.
Sustainable Development Goals

Doug Cress
WAZA

The great challenge of the twenty-first century is to raise people everywhere to a decent standard of living while preserving as much of the rest of life as possible.

Edward O. Wilson

“Sustainability” is a complex concept. United Nations (UN) negotiators spent four years working on language that could represent a global commitment to protect humanity and the planet, but “sustainable development” is as difficult to grasp today as ever. Does cellphone recycling count? What about a ban on plastic straws? Rainforests have to be the priority, right? Should we all go vegan?

The UN loosely defined the term as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” – but debates continue as to who defines those needs and who decides the future.

Fortunately, the Sustainable Development Goals (SDGs) were launched in 2016 as a pathway forward to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. And even though some confusion remains as to who bears responsibility for achieving each of the 17 goals, the good news is this: every act, every action and every achievement counts.

WAZA and its global membership are uniquely placed to take up leadership roles in the shift towards sustainable development. Not only do 700 million visitors enter zoos and aquariums each year, offering an enormous opportunity for education and behaviour change, but also the institutions themselves can model that change through commitments to greener operations.

Some WAZA members are already well down the path towards sustainability. Wellington Zoo (New Zealand) is the world’s first Carbon Zero certified zoo – meaning that any carbon emissions are cancelled out by reducing, reusing and recycling, while the Oregon Zoo (USA) saves 12 million gallons of water each year through recycling and collecting rainwater.

The Monterey Bay Aquarium’s Seafood Watch programme has played a major role in informing consumer demand and protecting fragile species since 1999, and Wildlife Reserves Singapore is working to eliminate all single-use plastic – including bags, bottles and straws – at its four parks.

Many other zoos and aquariums have similar programmes, and all of these mirror activities and meet targets established by the SDGs. As WAZA and its members move forward towards achieving goals set at the 72nd WAZA Conference in Berlin – including 50 percent of the membership to have eliminated single-use plastic by 2023 and 50 percent of the membership to be committed to certified sustainable palm oil products by 2023 – these efforts will come to align more closely with the SDGs.
The SDGs were divided into 17 categories, and some are easily linked to the interests and strengths of zoos and aquariums. Goal 14 (Life Under Water) and Goal 15 (Life on Land) have obvious links to conservation, while Goal 13 (Climate Action) is increasingly core to the community’s work.

Goal 12 (Responsible Consumption and Production) offers WAZA members an opportunity to make informed choices regarding the goods they buy and the waste they create, and both Goal 11 (Sustainable Cities and Communities) and Goal 9 (Industry, Innovation and Infrastructure) showcase the green building and innovative designs that are now standard in zoos and aquariums.

Other goals address issues such as education, gender equality, decent work and economic growth, each of which could become areas of impact among WAZA and its members. But the key is that as none of the SDGs is reserved specifically for zoos and aquariums, nor is any of them off-limits.

The SDGs were crafted from a UN resolution entitled “The Future We Want”. As civic institutions that have reflected the best efforts of their cities and countries for more than a century, it is clear that the future in question will include zoos and aquariums.

Wellington Zoo’s ethos is “Me tiaki, kia ora!” Let us look after the environment, and it will thrive. Wellington Zoo had a long journey to become the first carboNZero certified zoo in the world, one which is far from over. The carboNZero programme is the world’s first internationally accredited greenhouse gas (GHG) certification scheme, which provides companies with the tools to measure and reduce their carbon footprint, as well as offset it.

Being an environmentally sustainable organisation is not an end goal – it’s about making ongoing choices and identifying areas for improvement. Lowering the zoo’s carbon emissions and impact on the environment is about securing the future for animals, the environment and ourselves.

Conservation is at the heart of everything we do at Wellington Zoo. We take our commitment to minimising the environmental impact of our organisation very seriously and have been working on making our-day-to-day operations more sustainable for the past ten years, from reducing our power usage, to collecting rainwater and minimising waste to landfill.

Becoming carboNZero certified in 2013 was a natural step for Wellington Zoo as we continue to work on minimising our environmental impact. We’d been making great strides in the sustainability space but we hadn’t necessarily been great at talking about it. We knew we were doing great things, but to have it independently verified through carboNZero certification really promotes how our hard work and commitment paid off.

Over the last five years, we have continued to identify ways to decrease our emissions, including installing solar panels on the front entrance of the Zoo, installing more rainwater tanks and recycling stations and introducing our first 100% electric vehicle to our fleet. We have also made a concerted effort to improve our retail offering with around 35% of current stock eco-sourced or sustainable. Improving the quality of stock in the Zoo shop to better underpin the Zoo’s message of care for the environment has also seen a substantial increase in revenue.

Gaining certification is not just about offsetting as much as possible. CarboNZero certification requires the Zoo to measure our GHG emissions so we understand what our impact is on the global climate. We then make a commitment to manage and reduce our GHG emissions by creating an emissions management and reduction plan. Any remaining emissions that we cannot avoid are then offset by purchasing verified carbon credits. The emphasis of the programme is on reduction; offsetting is our last resort. We are specific in terms of where we purchase our offsets and we ensure we support a local native habitat-regeneration project such as Pigeon Bush.

Environmental Sustainability

Amy Hughes
Wellington Zoo

Entrance to Green Zoo Green You exhibit. © Wellington Zoo
As so many people from our community visit Wellington Zoo, we are in a unique position to showcase sustainability and inspire our community to take action to reduce their individual ecological footprint. Achieving carboNZero certification has given us a great platform to talk more widely about what we are doing in the sustainability space and to inspire others to take action.

Although we are proud of being the world’s first carboNZero certified zoo, sustainability is not about one organisation. We are equally proud of those organisations that have embarked on this journey. In our region, Zoos Victoria became carbon neutral in 2013, and Auckland Zoo has recently become carboNZero certified. Other zoos and aquariums are also on the journey to becoming carbon neutral and showcasing their environmental sustainability. And we at Wellington Zoo continue on our ongoing journey of learning how we can best reduce our impact on the planet to make a better future for all of us.

Wellington Zoo was honoured with the award due to the organisation’s unwavering commitment to environmental sustainability and imbibing the philosophy of accountability in all of their decision-making, particularly with regards to community engagement, construction projects and resource use. The Zoo has achieved several significant milestones, including reducing its waste to landfill rate, reducing water consumption, increasing its recycling rate, and becoming carbon neutral since 2013.

Chair of the WAZA Awards Committee, Mike Barclay, said: “Wellington Zoo had an outstanding application for this award. It is an institution with an innovative and long-standing commitment towards environmental sustainability. The Zoo has been invited to share their sustainability story with other institutions on several occasions, and this has inspired other zoos, aquariums and businesses to look at sustainability within their own organisations.”

Congratulations Wellington Zoo!
Palm oil has become one of the world’s most widely used edible vegetable oils and is found in around 50% of packaged products in supermarkets, from foods such as biscuits and cakes to cosmetics and soaps. Demand for this oil is increasing drastically due to its high productivity, efficiency and versatility.

Palm oil plays a key role in the economy of countries such as Malaysia and Indonesia; however, demand has resulted in the rapid expansion of oil palm plantations triggering widespread deforestation. Demand globally means that a boycott would have limited to no impact on how it’s grown; a whole industry change needs to take place. The best chance of protecting wildlife is to demand sustainably produced palm oil and continue to improve sustainability standards.

In 2014, Chester Zoo in the United Kingdom launched the Sustainable Palm Oil Challenge as a response to this problem, working with consumers, manufacturers, businesses and the palm oil industry to increase the demand for sustainable palm oil. The initiative started small within the zoo, with Chester Zoo auditing its own supply chain, ensuring the food products stocked in the zoo shops and restaurants that contain palm oil were from sustainable sources.

As part of a wider community behaviour change campaign, the zoo is now bringing other businesses in the city of Chester on board, working together to overcome barriers to adopting sustainable palm oil. Sustainable Palm Oil City is an initiative led by Chester Zoo alongside key conservation and industry partners, supported by a host of advisors and endorsed by conservation colleagues. This project is about collaboration and creating a pride in the Chester community, aiming to create a community of businesses in Chester who all use and promote sustainable palm oil. At this stage, it’s perhaps not realistic to expect every single organisation in Chester to use sustainable palm oil, but it is the zoo’s ultimate long-term goal.

To start the journey, Chester Zoo identified five target areas in the food and hospitality industry which the zoo and experts in the field felt would have an impact on suppliers in the local area. These include restaurants, cafés, schools and local authority catering providers. The Zoo asked businesses to make a pledge and use its freely available resources to make a change. Importantly, Chester Zoo asks them to make their pledge public and spread the word in the goal to make Chester a sustainable palm oil city.

But this is just a start. The zoo wants cities and towns in the UK and around the world to join them to create a network of sustainable palm oil cities. Within WAZA’s Conservation and Environmental Sustainability Committee, a working group is currently developing an action plan to help implement the agreements made in the Memorandum of Understanding between WAZA and the Roundtable on Sustainable Palm Oil (RSPO), signed in October 2017. The group is currently exploring ways to merge efforts from different zoological organisations around the world. Alongside Cheyenne Mountain Zoo, San Diego Zoo and Wildlife Reserves Singapore, Chester Zoo is representing on this group, sharing efforts from the zoo and the work it is conducting within BIAZA and EAZA palm oil groups.
Darrel Webber is the Chief Executive Officer of the Roundtable on Sustainable Palm Oil (RSPO). Webber joined RSPO in January 2011, based in Kuala Lumpur, Malaysia. The RSPO unites stakeholders from the various sectors of the palm oil industry: oil palm producers, processors or traders, consumer goods manufacturers, retailers, banks, investors, and environmental and social non-governmental organisations (NGOs), to develop and implement global standards for sustainable palm oil. The organisation comprises more than 4,000 members worldwide who have committed to produce, use or source sustainable palm oil certified by the RSPO.

In 2017, at the 72nd WAZA Annual Conference, WAZA and RSPO signed a five-year Memorandum of Understanding (MoU) to make certified sustainable palm oil the norm.

**Why is it critical to encourage users to make the move to sustainable palm oil?**

Users need to know they can be part of solving a big problem, and buying sustainable palm oil could be the channel through which they can help solve the big problem of unsustainable palm oil practices. Buying sustainable palm oil encourages producers to do the right thing, for the environment, for people, for workers, and in that sense if consumers do their part, we will have more and more people acting in the right way and making a difference.

**In the MoU signed between WAZA and RSPO, WAZA has committed its members to make the move to sustainable palm oil, with a target of having at least 50% of our members committed to sustainable palm oil by 2023. What steps can WAZA members take to ensure they’re using sustainable palm oil products in their supply chains?**

The first thing they need to do is to understand whether they do have palm oil in anything they use, so for example the food for the animals and the products in their shops and restaurants. Secondly, they need to talk to their suppliers and ask them about the palm oil content in their products, what palm oil they use and where they source it from. If their suppliers are RSPO members and they are buying sustainable palm oil, they should be able to tell you quite quickly which of their products contain sustainable palm oil, which ones don’t, and for the products which do contain sustainable palm oil – the percentages of how much sustainable palm oil it contains and where it is sourced from. If their suppliers aren’t currently using sustainable palm oil, they could look at competing brands which are members of RSPO, as it is a very competitive market. Some countries have a coalition of consumers who want to use sustainable palm oil. For example, the Singapore Zoo is part of a national coalition on sustainable palm oil. The coalition is formed of all the buyers and includes suppliers and traders in this alliance, then they try to work out the bottlenecks in the supply chain, so that among themselves they will be able to unblock the sustainable supply chains.

**What role do you think zoos and aquariums can play in the evolution of the palm oil industry and driving consumer demand for sustainable palm oil?**

Zoos and aquariums are in a unique role. On the one hand, they can raise the issues of unsustainable palm oil production with their visitors in a very direct way, because they have millions of visitors (consumers) and they have iconic wildlife in their zoos which can be used to explain the issues palm oil has on these animals. This is is great, because I don’t think many places can do that. On the other hand, they can also show clear solutions in what products they sell or consume, and the products they use for the animal feed. Zoos and aquariums can not only show the issues of palm oil, but can also show the solutions in a very practical way. Zoos and aquariums are great centres for education in terms of sustainable production and consumption.
Approximately 50% of common consumer products contain palm oil. Are there any easy ways for people to see if a product uses certified sustainable palm oil, besides going on the website to check it?

Just looking at the labels on products is often not enough and can be quite hard to find palm oil listed on them, as it will often just be listed as vegetable oil, as it’s often blended with other oils, depending on which oil is cheapest on the day it’s bought. An easy way of finding out is through the RSPO app; it tells you where you can buy certified sustainable palm oil. The more people who use the app helps to make it more accurate. Several zoos also have their own apps which can help consumers find sustainable palm oil products.

RSPO has a target of 100% certified sustainable palm oil in Europe by 2020. How do you plan to achieve this?

We need all the help we can get, which is why we have formed an alliance with WAZA. We rely on our RSPO members to live up to their commitments to achieve 100% certified sustainable palm oil by a certain date. We also rely on countries; some governments have made commitments that they will solely use certified sustainable palm oil by 2020 – they are called the Amsterdam Declaration Countries. But there are still some countries and markets which have some way to go.

In November, RSPO voted in its newly revised Principles and Criteria (P&C), raising the RSPO standards. In the past, RSPO has been criticised by some organisations which felt the standards were not enforced strongly enough. How are the new P&C different?

The collaborative, multi-stakeholder review process was the result of 18 months of work and received almost 11,500 individual stakeholder comments, the highest number of stakeholder comments of any RSPO consultation to date. The new standard aims to universally strengthen social development, environmental protection and economic prosperity across the sustainable palm oil value chain. The new standard also includes a number of new elements such as adopting no deforestation through the implementation of the High Carbon Stock Approach. The revised P&C are intended to strengthen transparency and inclusivity in the RSPO system, increase implementation of the RSPO standards, boost market uptake of sustainable palm oil through shared responsibilities, and create an enabling environment for our shared vision of market transformation.
Currently only a small number of zoos and aquariums are members of RSPO. Many of the other zoos have concerns that have kept them from joining as members. What would you say to those people who are not joining RSPO because they feel that RSPO is not making enough progress?

It’s hard to gauge when you are on the outside looking in. Maybe we don’t do a good enough job communicating as it’s very hard to communicate the dynamics of the discussions that are going on, it’s so technical and nuanced. The best option for the zoos and aquariums is to talk to the other zoos and aquariums who are already members of RSPO, especially zoos that are active members. That’s how you can better understand the goings-on of the RSPO. We would certainly like to have more zoos and aquariums as members because if we have more diverse stakeholders we uncover more diverse issues and therefore our solutions will be more diverse and therefore more sustainable.

They are also more than welcome to contact us directly and we can help them understand why the standards are set the way they are.

Earlier this year, RSPO suspended Nestlé’s membership for failing to submit its report detailing how it would ensure the use of certified sustainable palm oil. After facing public pressure, Nestlé then submitted its time-bound action plan. What would you like to say about the role WAZA members played in convincing Nestlé to comply with RSPO standards?

I would like to thank the WAZA membership who actively gave their views on Nestlé; it helped inform RSPO and Nestlé. Their actions were very informative and helpful.

RSPO Members

WAZA is pleased to announce it became an official member of the Roundtable on Sustainable Palm Oil (RSPO) in October 2018. As a member, WAZA has a say in RSPO’s decision-making, shaping efforts to make sustainable palm oil the norm. Through the membership, WAZA will continue to focus on its Memorandum of Understanding (MoU) with the RSPO, which seeks to further the two organisations’ shared goals of influencing consumers to use sustainable palm oil and to have at least half of the WAZA membership committed to sustainable palm oil practices and be RSPO certified by 2023.
Southeast Asia produces much of the high-value seafood exported to markets such as the United States, the European Union and Japan. It is also home to rich and diverse marine life threatened by unsustainable fishing and aquaculture practices.

The Monterey Bay Aquarium is tackling these challenges in partnership with the Carnegie Endowment for International Peace. Through the Southeast Asia Fisheries and Aquaculture Initiative, the aquarium is collaborating with regional governments and seafood producers in Thailand, Indonesia, Myanmar, Vietnam and the Philippines to overcome obstacles to sustainable seafood production.

The initiative brings each country’s local experts – the seafood producers, non-profits and government representatives who best understand conditions on the water – together with global advisors, to map a path towards seafood production that is both environmentally and socially sustainable.

In connection with the initiative, the Aquarium’s Seafood Watch programme has partnered with experts at Wageningen University in the Netherlands to develop a framework to identify gaps in aquaculture governance worldwide. Monterey Bay Aquarium aims to produce a tool that can be used at high levels of the government, to inform policies in support of sustainable aquaculture – and eventually for wild-capture fisheries as well.

But what exactly is “sustainable seafood”? Increasingly, the seafood industry has come to realise that the definition must be expanded to include serious social concerns such as human trafficking, forced labour, unfair wages and unsafe working conditions. In response, Seafood Watch and Conservation International brought experts on seafood and human rights together for a ground-breaking workshop on social justice issues in the seafood industry.

The “Monterey Framework” that emerged from the workshop identifies three key principles that together establish a global standard for social responsibility in the seafood sector: protecting human rights, dignity and respecting access to resources; ensuring equality and equitable opportunities to benefit; and improving food and livelihood security.

In February, Seafood Watch launched the Seafood Slavery Risk Tool, the first solution of its kind to help businesses assess – and address – the potential risk of forced labour, human trafficking and hazardous child labour in fisheries. The Risk Tool was originally created with Liberty Asia, Seafish, the Sustainable Fisheries Partnership (SFP) and outside experts, and is now jointly run by the Aquarium with Liberty Asia and SFP.

The Risk Tool, available to businesses at seafoodslaveryrisk.org, rates the likelihood that forced labour, human trafficking or hazardous child labour is occurring on fishing boats in a specific fishery. The ratings are derived from credible, publicly available sources, including reports by authoritative institutions and civil society organisations, and the process was subject to extensive peer review.

All images are from Seafood Watch fisheries staff visiting fisheries in Vietnam and Myanmar. © Monterey Bay Aquarium.
The Risk Tool complements Seafood Watch’s approximately 1,100 science-based seafood recommendations, which focus largely on the impact of fishing and fish farming on the health of ocean ecosystems. Using these resources in combination, businesses can address both environmental issues and human rights abuses associated with the seafood supply chain.

Monterey Bay Aquarium together with their partners are working towards a seafood supply that’s sustainable for both the ocean and for the people whose livelihoods depend on it.
When Balloons Fly, Seabirds Die

Olivia Shiels
Zoos Victoria

When it comes to marking a special occasion or choosing decorations for an outdoor event, we often think of using balloons. However, many people are unaware of the devastating impact balloons and their attachments can have on wildlife when they drift into the sky.

Aside from polluting the oceans, balloon debris is bad news for wildlife. A Commonwealth Scientific and Industrial Research Organisation (CSIRO) study in Australia found balloons and their attachments are in the top three most harmful pollutants threatening marine wildlife for both entanglement and ingestion. Birds can easily become entangled in the strings or ribbons of balloons, leaving them unable to fly.

The impact balloon litter can have on wildlife has been well documented in the flesh-footed shearwaters on remote Lord Howe Island. Researchers from the University of Tasmania and the Institute for Marine and Antarctic Studies have been following the species at Lord Howe Island for over 10 years, and there are frightening results from field surveys.

In 2014, researchers found 100% of flesh-footed shearwater chicks across the colony had marine waste in their stomachs, with balloon clips one of the most common and readily identifiable items found.

Chicks are mistakenly fed the litter by their parents and can be left too weak to leave the nest. The decline in shearwater numbers on the island is directly linked to the ingestion of this marine debris and is a warning that many seabirds could be facing a similar fate.

In 2017, Zoos Victoria and Phillip Island Nature Parks launched the “When balloons fly, seabirds die” campaign, alongside researchers at Lord Howe Island, to highlight the impact of balloons on seabirds and other wildlife, and call on Australians to make a switch to blowing bubbles at their outdoor events. So far, more than 112,000 people and organisations have promised to use wildlife-friendly alternatives at their next outdoor event and over 160 groups have signed up as supporters, including schools, zoos, businesses and environmental groups.

Zoos Victoria, with help from their partners at Lord Howe Island and Phillip Island Nature Parks, will continue to monitor the prevalence of balloons and their attachments on beaches and in the ocean over time. Annual sampling of the stomach contents of shearwater chicks will also be undertaken at these two sites with the hope of seeing a reduction in the amount of balloon waste present.

For more information, visit: zoo.org.au/balloons
Global plastic production has skyrocketed since its popularisation as a consumer material in the 1950s. According to a 2015 report from the Worldwatch Institute, 300 million tonnes of plastic was generated in 2015, compared to 1.7 million tonnes produced in 1950. This alarming figure is projected to increase to 600 million tons within the next 20 years.

These plastic products are diverse and widespread – from disposable plastic water bottles, cutlery and bags to straws. Though useful for on-the-go lifestyles, these products have a long-lasting impact because plastic never entirely biodegrades. It instead remains in the environment for hundreds of years as toxic microplastics, many of which make their way into oceans, lakes and rivers. Scientists are predicting that, without action, the amount of plastic in our oceans will exceed the amount of fish, pound for pound, by 2050. All that plastic puts our planet’s wildlife at risk – something veterinarians and animal care experts have seen first-hand when assisting with marine mammal rescue efforts, including the team at Chicago’s John G. Shedd Aquarium.

In 2017, Shedd Aquarium launched an awareness campaign focused on reducing plastic pollution that is plaguing the aquatic world. After learning of an audit conducted in the United States that showed Americans use an estimated 500 million plastic straws daily, Shedd targeted straws first. The aquarium launched a campaign on Earth Day aptly named Shedd the Straw that challenged the Chicagoland community and aquarium visitors to remove single-use plastic straws from their everyday life. The concept was simple and offered a few solutions to help consumers make the commitment, whether it be declining on the plastic straw provided free-of-charge in beverages, or choosing a reusable or compostable alternative.

While garnering support from individuals, Shedd Aquarium also took this challenge to Chicagoland restaurants. Shedd started small by contacting restaurants it previously had connections with through its Sustainable Seafood Programme and asked them to Shedd the Straw for just one day. On Earth Day, a dozen restaurants committed to go straw-free for the day. A few months later, on World Oceans Day in June, the aquarium garnered the same commitment from eight additional restaurants, for a total of 20 restaurants. Based on numbers provided by the restaurants, that meant more than 10,000 straws were not used on World Oceans Day.

Since launching the campaign, the aquarium has developed many of these one-day commitments into long-term partnerships. Currently, more than 65 restaurants are working with Shedd Aquarium to Shedd the Straw, and this number continues to grow. As the aquarium continues to engage those living in Chicago, including restaurant-owners, policy-makers and Shedd visitors, the organisation looks forward to making a positive impact on waterways with every commitment to Shedd the Straw.
Wildlife Reserves Singapore, which operates Jurong Bird Park, Night Safari, River Safari and Singapore Zoo, is on a journey to reduce single-use plastics by replacing them with reusable items or converting them to alternative eco-friendly options.

Given the tropical weather in Singapore, which regularly climbs to a daily high of over 30° Celsius (86° Fahrenheit), bottled water unsurprisingly is one of the largest contributors of single-use plastic waste in Wildlife Reserves Singapore parks. Each year, park guests purchase around half a million bottles of water and unwittingly contribute the same amount of plastic waste, adding to the devastating global impact of plastic usage to the environment and wildlife.

To tackle this challenge and still meet the guests’ need for drinking water, the organisation partnered with sustainable solutions company Hyflux to customise and install water dispensers throughout their four parks. Guests are encouraged to bring their own water bottles to fill up at no cost, or pick up a reusable water bottle at one of the park retail stores.

Wildlife Reserves Singapore is nearly two years into the journey, and has:
- Dispensed more than 1.2 million single-use plastic bottles worth of water, thereby reducing the purchase of bottled water in the parks
- Replaced single-use plastic bottles with eco-friendly paper carton packaging
- Reduced the use of disposables at the parks’ eateries, and converted all single-use plastics to eco-friendly alternatives
- Halted the distribution of free carrier bags at the retail stores and eateries to encourage the use of reusable shopping bags. Guests can purchase eco-friendly, reusable bags at a nominal fee, with all proceeds going towards the organisation’s conservation projects
- Committed to converting all plastic bottled beverages to aluminium can alternatives by end 2018

In October 2017, Wildlife Reserves Singapore ran a sustainability campaign to raise awareness of the devastating impact of plastic waste, and to rally park guests and the local community to reduce consumption of single-use plastic in their everyday lives. “The Deadliest Monster” campaign cast a spotlight on plastic waste as the deadliest monster of our waters killing over 1 million animals annually.

In just one month, the campaign:
- Reached more than 34,000 people online
- Garnered over S$338,000 value in PR exposure
- Engaged more than 10,000 guests at the education booth and animal presentations
- Doubled the sales of reusable water bottles in stores
- To engage young minds, a “Zoo goes to School” programme “Trash Busters” was specially developed for pre-schools, and “The Deadliest Monster” art competition drew hundreds of creative entries from enthusiastic pre-schoolers.

School children fill their reusable water bottles at one of the 27 water dispensers located around the four parks. © Wildlife Reserves Singapore

In October 2017, Wildlife Reserves Singapore’s Zoo Goes to School: Trash Busters reaches out to pre-school children and seeks to educate and encourage young minds on the harmful effects of plastic waste to the environment, and on how to properly dispose waste or to recycle where possible. © Wildlife Reserves Singapore

The Wildlife Reserves Singapore teams continue to engage hundreds of people and schools on the impact of plastic waste at out-of-park roadshows and events throughout the year.
Plastic pollution is one of the greatest threats to the ocean. More than eight million tons of plastic go into the ocean annually, the equivalent of dumping one garbage truck of plastic every minute. The effects are detrimental to wildlife and marine ecosystems, with one million seabirds and 100,000 marine mammals dying every year from plastic pollution.

There is a belief that most of the litter that goes into the ocean is not intentional, but the result of unawareness, which is why the Oceano Azul Foundation started a campaign to encourage and involve the Portuguese public to unequivocally mobilise for a blue ocean.

Oceano Azul Foundation with Oceanário de Lisboa (Lisbon Aquarium), in partnership with Olá, the ice-cream company, launched a marine litter campaign titled: “If it doesn’t go in the bin, it goes in the sea.”

The campaign, launched in 2017, serves to raise awareness about individual responsibility in preventing marine litter, particularly plastic pollution – one of the planet’s biggest environmental concerns. The initiative, which features a large advertising campaign, aims to amplify information and literacy about the impacts of marine litter in ocean wildlife.

The campaign was designed to convey a new perspective about the importance of disposing of garbage properly. Many people are not aware that the litter disposed of on the ground, into the toilet or recycled incorrectly, even far from the coast, may end up in the ocean.

“There is not yet a clear awareness of the importance of disposing of garbage in the right place to reduce ocean pollution. With this campaign, we aim to alert people that their garbage may end up in the sea, thus threatening the marine environment and affecting millions of species irreversibly,” says the Chief Executive Officer of the Oceano Azul Foundation, Tiago Pitta e Cunha.

With three TV advertisements, the campaign is reaching a large audience. The films reveal the importance of changing individual behaviours to protect the ocean. The three stories depict common everyday situations in which, at the time of discarding a cotton bud in the toilet, a cigarette butt on the ground and an ice-cream package on the beach, the characters involuntarily initiate a path that symbolises the actual route that these discarded products can take until they end up in the sea.

“The campaign messages are clear. If we do nothing, marine litter will continue to kill thousands of marine animals every year. If we do nothing in 30 years there will be more plastic in the sea than fish,” concludes Tiago Pitta e Cunha.

Created by Sociedade Francisco Manuel dos Santos (SFMS), the Oceano Azul Foundation aims to contribute to a healthy and productive ocean to the benefit of the planet, and to fulfil its mission it counts on the activity of Oceanário de Lisboa.
Last year, WAZA joined HSH Prince Albert II of Monaco, Karmenu Vella, European Commissioner for the Environment, Maritime Affairs and Fisheries and Erik Solheim, former Head of the United Nations Environment, to launch the World Aquariums Against Marine Litter campaign.

The aquariums’ campaign is an EU contribution to the #CleanSeas campaign of the United Nations Environment Programme aimed at engaging governments, the general public, civil society and the private sector in the fight against marine plastic litter.

In October 2018, a second campaign was started with the launch of a global coalition of aquariums against plastic pollution. The campaign “World aquariums #ReadyToChange to #BeatPlasticPollution” will see aquariums all over the world organise educational activities in their facilities and will encourage them to change their procurement policies to eliminate all single-use plastic items.

The aim of the campaign is to have at least 200 aquariums on board by 2019, raising public awareness about plastic pollution. The institutions involved in the initiative will engage with potential partners, sponsors and NGOs to promote best practices in the use of plastic on a local, regional, national and global scale. A number of WAZA member aquariums have already joined the coalition and are raising awareness of plastic pollution in their institutions.
Loro Parque, Tenerife, has replaced single-use plastic bottles with biodegradable bottles. © Loro Parque

“We are delighted that so many WAZA members have already joined the global coalition, and we hope to see more of our member aquariums joining the coalition and being a positive force for change,” said WAZA Chief Executive Officer, Doug Cress.

The global coalition of international aquariums is coordinated by the European Commission, together with the United Nations Environment Programme and with the support of the Oceanographic Museum of Monaco, the European Union of Aquarium Curators, WAZA, the US Aquarium Conservation Partnership and the Intergovernmental Oceanographic Commission of UNESCO.

EU Commissioner for Environment, Maritime Affairs and Fisheries, Karmenu Vella, said: “The European Commission has been working for 18 months to instigate and build this global coalition. Aquariums are a window to our ocean. With their collections and their educational programmes, they show us what we need to protect, and they inspire the ocean-lovers of tomorrow. Millions of people visit aquariums around the world every year. This will mobilise them to rethink the way we use plastic.”

Currently, more than 160 aquariums around the world have already pledged support to the new coalition World aquariums #ReadyToChange to #BeatPlasticPollution.

Cartoon images © Gatis Šļūka

Loro Parque, Tenerife, has replaced single-use plastic bottles with biodegradable bottles. © Loro Parque
Action Indonesia GSMPs

Stuart Young
IUCN SSC Asian Wild Cattle Specialist Group

The Action Indonesia Global Species Management Plans (GSMPs) set out to manage three threatened Indonesian taxa: anoa (*Bubalus depressicornis* and *B. quarlesi*), banteng (*Bos javanicus*) and babirusa (*Babyrousa sp.*). These GSMPs use the One Plan Approach to combine the skills, resources and expertise of both the zoo community and *in situ* practitioners. The goals of the Action Indonesia GSMPs are:

- To reach a demographically and genetically healthy global *ex situ* population
- To raise awareness among zoo visitors
- To use zoo expertise to help *in situ* conservation
- To prioritise and support *in situ* projects

These GSMPs were founded in 2015 by the Indonesian Zoo and Aquarium Association (PKBSI), AZA, EAZA, the IUCN Species Survival Commission and the Asian Wild Cattle and Wild Pig specialist groups. In March 2016, they were approved and endorsed by the Indonesian Ministry of Environment and Forestry (KKH) and WAZA. They have since developed into a strong global alliance with over 50 partner institutions including zoos, NGOs, governments and universities. Thanks to WAZA’s GSMP framework, as well as face-to-face and virtual meetings with all members, there is now a good understanding of the varying regional and institutional processes among the Action Indonesia partners.

Originally, the Action Indonesia GSMPs were organised with species-specific committees, and all activities involving a given species were arranged by the convenor and co-convenor. The second planning workshop in February 2018 saw the GSMPs rearranged into thematic working groups (population management, husbandry training, *in situ* conservation, fundraising and communications). This allows for more efficient work across all species and will enable greater collaboration in areas such as husbandry training, education and fundraising.

Zoo educator training, Taman Safari Prigen, October 2017. © John Abernethy
The Sumatran tiger (*Panthera tigris sumatrae*) GSMP also joined the ungulate GSMPs for the second planning workshop. The synchronising of these four Indonesian GSMPs will help to align the processes of KKH and PKBSI for future husbandry training and animal transfers, as well as allow greater collaboration for education and fundraising.

Since their endorsement in 2016, the Action Indonesia GSMPs have delivered various training sessions to PKBSI zoos. These include Anoa and Babirusa Husbandry Training, Banteng Transportation and Husbandry Training, and Zoo Educator Training. In addition to this, training was delivered to local forestry office staff in Sulawesi to enable them to better manage rescued and confiscated anoa and babirusa. This represents a skills-transfer from zoo experts to *in situ* staff, further embracing the One Plan Approach. The Action Indonesia GSMPs have also supported several grants for NGOs such as AITo and Yani, working towards the *in situ* conservation of anoa and babirusa in Sulawesi.

Another major achievement of the GSMPs is the successful breeding and transfer of animals. In July 2018, two years of planning, negotiating and relationship-building resulted in the successful transfers of three banteng bulls. This was a major milestone for Action Indonesia; as well as being the first implementation of cooperative transfer recommendations of the GSMPs, they also involved the movement of animals between zoos (Taman Safari Indonesia) and Baluran National Park.

It is hoped that these successful transfers will snowball, and we will soon also see the implementation of the transfer recommendations for anoa and babirusa. Along with continued recommended breeding, this will enable us to take major steps towards achieving our goal of demographically and genetically healthy *ex situ* populations for each species. Continued delivery of husbandry training, and the production of husbandry guidelines, will contribute to achieving this goal. Additionally, another key role for the GSMPs in the near future is to increase the *in situ* activities in Sulawesi, as well as expanding to include banteng conservation projects in East Java.
Support from zoos has been key to this partnership, and this continued support is vital for future successes. AZA, EAZA and PKBSI zoos have provided financial and logistical support, as well as sending staff to participate in meetings and training sessions. You can also help by providing financial support or training materials, or by staff leading training workshops. In August 2019, we will establish “Action Indonesia Day”, a coordinated day of activities and social media posts aimed at raising awareness for these species. Again, the support of zoos is key to raising awareness for these threatened, under-appreciated animals.

If you would like to get involved or would like more information about these GSMPs, please contact Stuart Young (s.young@chesterzoo.org).
Recap of the 73rd WAZA Annual Conference in Bangkok

More than 300 delegates from more than 45 countries around the world gathered in Bangkok, Thailand for the 73rd WAZA Annual Conference, 21–25 October 2018.

During the conference, WAZA made a number of resolutions and stepped boldly into the international arena as it agreed to organise a Global Species Congress to address the conservation and extinction crises, committed to sustainable forestry guidelines, and voted to close one of Thailand’s most notorious zoos.

Delegates heard from keynote speakers such as United Nations Messenger of Peace Dr Jane Goodall, crane expert Dr George Archibald, Forest Stewardship Council (FSC) director Kim Carstensen, and Thai conservationist Prof. Pilai Poonswad.

“WAZA is in an exciting position, poised to tackle critical global issues going forward. The annual conference really saw the global zoo, aquarium and conservation community coming together and taking decisive action on significant matters,” said WAZA President, Dr Jenny Gray. “WAZA and its members are becoming a global force for change.”

WAZA delegates embraced the WAZA Global Strategy, which calls for the rapid expansion of the membership into regions and countries in Asia, Africa and Latin America where WAZA had little or no impact to date, and an emphasis on recruiting more aquariums to better equip WAZA to address marine and freshwater issues.

WAZA also agreed to take the lead in organising a Global Species Congress in the coming years, based on a 2008 resolution by the International Union for the Conservation of Nature (IUCN) that called for an international summit to “to highlight the status of the planet’s species, articulate and review the consequences of the threats that they face, and chart their future conservation”.

“WAZA is uniquely placed to play a leadership role in staging a Global Species Congress,” said WAZA Executive Director Doug Cress. “An international forum that focuses squarely on species is long overdue and will play an important role in aligning with major assemblies on environment, biodiversity and conservation in the years ahead.”

Group photo of WAZA conference participants. © Big Apiratmontri
Delegates listening to presentations. © Big Apiratmontri
Mark Reed feeding the ring-tailed lemurs during the Khao Kheow Open Zoo visit. © Big Apiratmontri
Conference delegates. © Surain Suvadinkul
Cultural performance during the opening ceremony. © Big Apiratmontri
WAZA expanded its suite of sustainable development agreements in Bangkok, signing a Memorandum of Understanding with the Forest Stewardship Council that called on 50 percent of WAZA members to be committed to sourcing 70 percent certified sustainable wood and paper products by 2023. FSC, meanwhile, agreed to increase its FSC-certified forests globally by 50 percent by 2023, with an emphasis on natural forests in tropical regions.

WAZA delegates also took the bold step of resolving to close the Pata Zoo, a dilapidated institution atop the Pata shopping mall in downtown Bangkok that includes endangered species such as gorilla, bonobo, rhinoceros hornbill, Komodo dragon, chimpanzee and orangutan among the 300 animals in the two floors of exhibits. Numerous WAZA delegates, including Dr Goodall, visited the zoo during the conference, and WAZA passed a resolution to help improve welfare and husbandry standards at the Pata Zoo, as it works with Thai government officials to close the zoo as soon as possible.

WAZA also honoured former Sedgwick County Zoo director Mark Reed with the WAZA Heini Hediger Award, an accolade given to leaders in the global zoo and aquarium community. Reed, who retired in 2016 after 37 years at the Kansas institution, also served eight years as a member of the WAZA Council. The WAZA Conservation Award was given to Taronga Zoo in Australia, while the brand new WAZA Environmental Sustainability Award went to Wellington Zoo in New Zealand.

The 74th WAZA Annual Conference will be hosted by Fundación Temaikén, in Buenos Aires, Argentina from 3–7 November 2019. We look forward to seeing you there.
WAZA and a number of its members, as well as regional and national zoo and aquarium associations, are working with Global Wildlife Conservation (GWC) to save the elusive and critically endangered saola antelope. Earlier in the year, zoos and affiliated organisations around the world generously contributed or pledged more than US$ 350,000 to support efforts that represent the last best hope to save the critically endangered species: a conservation breeding centre.

WAZA, at its 72nd Annual Conference last year, made the decision to forgo the usual conference goody bags and instead donate US$ 5,000 to the saola fund, in lieu of the often-wasteful conference staple. WAZA also set up an online fundraising campaign in December, to garner additional funds from supporters. The Saola Working Group (SWG) will use the funds received from the zoo fundraising campaigns to establish a conservation breeding centre in Vietnam and improve protection of forest areas in Vietnam and Laos for eventual re-introduction of saola. Vietnam’s Ministry of Agriculture and Rural Development, in technical partnership with the SWG, has selected Vietnam’s Bach Ma National Park as the site for the world’s first saola breeding centre.

Only discovered in 1992, the saola is considered to be the most surprising zoological find of the 20th century. The species is so rare and elusive that biologists have only photographed it five times in the wild since its discovery, all by camera traps – twice in Laos and three times in Vietnam. The saola is listed as critically endangered on the IUCN Red List of Threatened Species, but the actual size of the population is unknown. The current population is thought to be a few hundred at maximum and possibly a few dozen at minimum. Its scarcity makes it one of the greatest priorities for conservation in the region.
Now in its second year, the WAZA Nature Connect Programme has funded 32 projects in 22 countries and has connected more than 3,000 families and 12,000 individuals to nature.

The programme encourages and supports the WAZA community to provide outdoor facilitated experiences that connect children and their families to nature and inspire them to take action to conserve the natural world. It is funded by the Disney Conservation Fund (DCF) and is managed by WAZA in collaboration with the International Zoo Educators (IZE) Association, which provides technical support. Since the programme started at the beginning of 2017, the Disney Conservation Fund has provided the programme with €1.1 million of funding to connect people with nature.

The grants are available to any WAZA member either for work they do at their own zoo or aquarium, or for work they do together with field conservation partners. The latest round of funding is slightly different from last year in that the grants available this year are greater (up to US$20,000 per application), the focus is on families taking action, and the period of time over which the programme can occur has been extended from five months to one year.

In this new round of funding, two types of Nature Connect grants are available. The first is for family conservation action project grants that involve the same groups of families, gathering more than five times over the course of a year. The programme allows families to gain conservation skills, see the impact of their actions over time, and develop a mindset and habit of taking conservation action in their daily lives.

The conservation campaigns are an entirely new type of Nature Connect grant. These grants will fund WAZA members to run public campaigns focusing on a particular conservation action, habitat or species. The campaign should explain what local people can do to mitigate the chosen issues and should build up to one or more events where the community or zoo and aquarium visitors can gather and take action. The campaign can tackle issues such as pollution, invasive plants, lack of awareness of local nature, habitat loss, illegal trade and more. While the mass action events might include beach clean-ups, a bioblitz, creating a community wildlife garden or tree-planting. The opportunities are endless, and we are happy to discuss your ideas further.

Applications for the family conservation action project grants are now open, and the closing date to apply is 10 January 2019. Applications for the conservation campaign grants will open in January–February 2019. We invite all WAZA members to apply for the grants to create innovative ways to enhance the connection that families have with the natural world and get them involved in taking conservation action. The WAZA website contains more information about the grants, as well as various resources to help inspire you.

If you wish to discuss your ideas or need help with your application, please contact us on natureconnect@waza.org.
Earlier this year, Marwell Zoo in the United Kingdom unveiled its latest development, the new Energy for Life: Tropical House.

The tropical house is Marwell Zoo’s biggest project to date and will see Marwell become the first zoo in the UK to generate energy using waste “zoo poo”. The innovative and sustainable exhibit marks the second phase of a £17 million (€19 million) investment programme at the zoo over the next eight to ten years, creating improved habitats for animals and more immersive experiences for guests.

The idea for a Tropical House with complementary education and sustainability goals was first considered in 2012. Marwell wanted to move away from viewing animals through conventional barriers and glass, so guests can experience uninterrupted face-to-face encounters with wildlife in a totally immersive environment. There was a desire for a much-needed indoor and weather-proof space in order to enhance the Marwell guest experience. Additionally, in order to help the zoo achieve their goal of becoming completely carbon neutral by 2020, they realised they had a significant untapped energy resource in animal waste (dung, soiled bedding and leftover hay) which could be used for renewable energy within the zoo.

These early ideas were communicated to architects and wider consultant teams, and together they created the efficient and energy-saving design, including animal and plant exhibit areas and the guest journey. Marwell’s projects team employed Nautilus to theme the 1,000-square-metre exhibit area and create the aquarium and pools.

The exhibit spans two levels with fantastic vantage points. Guests can experience face-to-face encounters with a diversity of wildlife and exotic plants in a tropical climate, while learning about the flow of energy through life. There are yellow-throated frogs below a cascading waterfall, a Linné’s two-toed sloth in the lush forest canopy and a group of pygmy marmosets exploring their own island above the exhibit’s impressive 70,000-litre aquarium, which is home to 2,500 fish. Tropical free-flying birds include crested wood partridge, Sclater’s crowned pigeon, white-naped pheasant pigeon, Nicobar pigeon, Eastern superb fruit dove, Brazilian tanager, Asian glossy starlings, Java sparrow and Fischer’s turaco. Meanwhile, the bustling forest floor is home to Javan chevrotain (mouse deer), Burmese mountain tortoises and insects such as lesser goliath beetles. The Tropical House is also home to a crocodile monitor lizard and a colony of leaf-cutter ants. The Tropical House sets new standards of husbandry for the species displayed, with large space provision, near-natural environment and rainforest climate as well as extensive use of innovative technology for supplementing heat and light.
James Cretney, Marwell Zoo’s Chief Executive, said the £8 million project was supported by a £1.5 million Local Growth Fund (LGF) investment by Enterprise M3 Local Enterprise Partnership (LEP). He said: “We are thrilled to open this ground-breaking new exhibit which marks a very proud and important moment in our history. The LEP’s involvement has itself been catalytic and, in addition to their grant, has allowed us to understand and support a wider regional strategy of economic growth, STEM skills development and low-carbon technology, all of which ‘Energy for Life’ will deliver upon. The unique combination of visitor experience and innovative green technology creates a compelling story, throwing a spotlight on promoting alternative, renewable forms of energy. We hope guests, both young and old, can learn more, and feel inspired to join us in doing their bit to make a difference too.”

The contemporary structure is built using the latest in ETFE (ethylene tetrafluoroethylene) roofing. This cutting-edge material is lightweight, self-cleaning, strong and fully recyclable, making it a more sustainable option. The highly insulating roof canopy allows natural UV light to shine through, creating ideal conditions for the 650 individual plants from 65 different species to flourish and form a lush habitat for the animals. Rainwater from the roof is harvested in two 50,000-litre tanks to provide water inside for the aquaria and plant-watering, making the building self-sufficient for water.

The exhibit features a woodchip boiler that will be supplemented by a specialist boiler capable of burning straw-based animal manure. The exhibit will generate energy through the combination of processing waste “zoo poo” and locally sourced wood-chip biomass. This will, in the coming months, provide heating not only for the Tropical House itself but also for buildings across the zoo, enabling the zoo to significantly reduce its carbon footprint and dependency on fossil fuels.

The unique combination of visitor experience and sustainability creates a compelling interpretation story and educational opportunities for the exhibit. Through the Tropical House experience, Marwell aims to encourage interest and understanding of the flow of energy through life and raise awareness of how the energy we need to power our modern lifestyles is generated and the consequences for the global environment. The exhibit highlights the changing global climate, the measures the zoo is taking to reduce carbon emissions and how they can inspire guests to make a difference.”
Enriching Lives: Improving the Wellbeing of Captive Animals
By Dr Brij Kishor Gupta,
Central Zoo Authority India (CZA)
brijkishor68@yahoo.com
Year: 2017 • 196pp
ISBN: 978-93-5254-185-0

From the days where Hal Markowitz developed behavioural engineering in the 1970s to the writings of Jill Mellen and David Shepherdson in the 1990s, the art of animal enrichment has evolved into one of the pillars of animal wellness in zoos. In the past 40 years, the idea of creating new experiences to stimulate the minds of animals has gone from a scattered luxury to an integral part of animal care. Enrichment has also become much more sophisticated and scientific in its practice. Dr Brij Kishor Gupta captures this in his new book, Enriching Lives: Improving the Wellbeing of Captive Animals.

In Enriching Lives, Gupta gives a concise context of animal enrichment and its development before outlining extensive recommendations of how it can be used. Gupta goes first by taxon group and then specific species to lay out a variety of enrichment ideas appropriate for the species in that group. Every section breaks down enrichment into 12 classifications, ensuring physiological needs and social enrichment/groupings are met.

A Forest in the Clouds: My Year Among the Mountain Gorillas in the Remote Enclave of Dian Fossey
By John Fowler
Pegasus, 2018 • 400pp
ISBN 978-1-68177-633-0

A Forest in the Clouds is John Fowler’s memoir of his time spent at the Karisoke Research Center in the remote mountain gorilla camp of Dr Dian Fossey, in Rwanda, a few years prior to her murder. Drawn to the adventure and promise of learning the science of studying mountain gorillas amid the beauty of Central Africa’s cloud forest, Fowler soon learns the cold harsh realities of life inside Fossey’s enclave 10,000 feet up in the Virunga Volcanoes. This story is the only first-person account from inside Dian Fossey’s beleaguered camp. Fowler must come to grips with his own aspirations, career objectives and disappointments as he develops the physical endurance to keep up with mountain gorillas over volcanic terrain in icy downpours, only to be confronted by the frightening charges of indignant giant silverbacks or to be treed by aggressive forest buffalos. Back in camp, he must nurture the sensitivity and patience needed for the demands of rehabilitating an orphaned baby gorilla.

On John Fowler’s book, Dr Jane Goodall said: “John Fowler is a born storyteller. Prepare to climb with him high up into the forest as you experience fear, exhaustion, rain-drenched chill, and, finally, the supreme thrill of proximity with the awe-inspiring mountain gorillas. It was her love for them, and her fight to save them, that finally alienated Dian Fossey from human society. Unpredictable, tormented and embittered, she now casts a dark shadow over this remote world.”
Update on International Studbooks (ISBs)

Changes between May 2017 and October 2018

Number of active ISBs: As at 31 July 2018 there are 129 active international studbooks (ISBs), including 141 species/subspecies (plus Partulids).

ISBs archived
- Red wolf (Canis rufus) – WAZA thanks William Waddell and Point Defiance Zoo and Aquarium for their long-term support towards this species ISB.
- Vietnamese pheasant (Lophura hatinhensis) – This is now a former species (L. hatinhensis), now considered an inbred phenotype of the Edwards’s pheasant (L. edwardsi). WAZA thanks Dang Gia Tung (Hanoi Zoological Gardens), Alain Hennache and Julie Levrier (Parc de Clères), and Christopher Holmes (Houston Zoo) for keeping this studbook.

New ISBs approved
- None.

New co‑keepers approved
- Banteng (Bos javanicus) – Steve Metzler (San Diego Zoo Global, USA) approved as co-keeper. He will work with the ISB keeper for this species, Ivan Chandra, from Taman Safari, Indonesia.

Transfer of ISBs to new keepers
- Black-footed cat (Felis nigripes) to Kara Heynis (Lory Park Zoo and Owl Sanctuary South Africa)
- Crowned sifaka (Propithecus coronatus) to Luca Morino (Paris Zoo, France)
- Fossa (Cryptoprocta ferox) to Johannes Pfeiderer (Duisburg Zoo, Germany)
- Mexican grey wolf (Canis lupus baileyi) to Sarah Greely (The Living Desert, USA)
- Northern bamboo lemur (Hapalemur occidentalis) to Luca Morino (Paris Zoo, France)
- Polar bear (Ursus maritimus) to Antje Zimmermann (Rostock Zoo, Germany)
- Przewalski’s horse (Equus ferus przewalskii) to Jaroslav Šimek (Prague Zoo, Czech Republic)
- Red-crowned crane (Grus japonensis) to Ami Nakajima (Tama Zoological Park, Japan)
- Sand cat (Felis margarita) to Jérôme Catinaud (Parc des Félins, France)
- Southern pudu (Pudu puda) to Silja Heller (Wuppertal Zoo, Germany)

Transfer of ISBs to new institutions
- Black lemur (Eulemur macaco) from Saint Louis Zoo, USA, to Peggy Hope from Indianapolis Zoo, USA
- Blue-eyed black lemur (Eulemur flavifrons) from Saint Louis Zoo, USA, to Peggy Hope from Indianapolis Zoo, USA
- Edwards’s pheasant (Lophura edwardsi) to Tobias Rhade (Berlin Zoo, Germany)
- Giant otter (Pteronura brasiliensis) from Zoo Dortmund, Germany, to Tim Schikora from Zoo Schwerin, Germany
- Matschie’s tree kangaroo (Dendrolagus matschiei) to Davi Ann Norsworthy (Lincoln Children’s Zoo, USA)
WAZA embarked on a new phase in its 83-year history with the relocation of the Executive Office to Barcelona, Spain, in September. WAZA had been based in Gland, Switzerland since 2010.

WAZA’s new office is in a 1905 modernist building near Plaça Catalunya in central Barcelona, and brings together the entire executive staff, which had previously been working separately across the globe for the past year.

“The past year has been an interesting challenge working across time zones and mostly through digital means, but now that the staff is together in one place we are able to work collaboratively as a unified team,” said WAZA Chief Executive Officer, Doug Cress. “We look forward to continuing our work expanding the impact and reach of zoos and aquariums in animal welfare, wildlife conservation, community engagement and essential global issues.”

WAZA was founded as the International Union of Directors of Zoological Gardens (IUDZG) in Basel, Switzerland, in 1935. The organisation ceased to exist during World War II. Following the war a new International Union of Directors of Zoological Gardens (IUDZG) was created in Rotterdam in 1946. The name was then later changed to the IUDZG – World Zoo Organization in 1991, and relocated to Apple Valley, Minnesota, in the United States three years later.

The WAZA moniker was adopted in 2000, and the headquarters were shifted to Berne, Switzerland in 2001.
The 3rd Joint Taxon Advisory Groups (TAGs) Chairs Meeting

Martín Zordan
WAZA

After two previous successful Joint Taxon Advisory Groups (TAGs) Chairs meetings, a third edition took place on 1–2 May 2018 in Budapest. The meeting, hosted by the Budapest Zoo & Botanical Garden, welcomed more than 170 delegates from over 30 countries, including animal programme leaders, populations biologists and specialists from the International Union for the Conservation of Nature Species Survival Commission (IUCN – SSC), among others.

Dr Onnie Byers (Chair of the IUCN Conservation Planning Specialist Group – CPSG) delivered a compelling keynote presentation regarding the role TAGs can play in the Assess-Plan-Act conservation framework that the IUCN SSC promotes. Under this approach, TAGs can increase their contributions by collaborating in the IUCN Red List assessments process, in the conservation planning phase and by working on the implementation of the recommended conservation actions. Hopefully, this model will further increase the effectiveness and value of our conservation role. Additionally, there were several presentations that provided excellent case studies on how different TAGs are adopting this framework and establishing valuable partnerships with IUCN-SSC Specialists Groups.

The 3rd Joint TAG Chairs meeting included new sessions and more representation from the different regions. From the European Association of Zoos and Aquaria (EAZA) region, we learnt about how the Integrated Collection Assessment and Planning (ICAP) process is being used as an effective tool to bring to life the new EAZA population management structure. Additional sessions provided opportunities to get updates on some of the latest developments across the WAZA network including the Association of Zoos and Aquariums (AZA), India’s Central Zoo Authority (CZA), Latin American Zoo and Aquarium Association (ALPZA), Pan-African Association of Zoos and Aquariums (PAAZA) and the Species Conservation Tool Initiative (SCTI). A representative from the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) invited the TAGs to collaborate and share their unique expertise to help implement this convention.

A new session on animal welfare was particularly appreciated and allowed for an interesting discussion on the challenges and opportunities to further promote optimal animal welfare. A panel with speakers from Edinburgh University, WAZA, the AZA Population Management Centre, the AZA Reproductive Management Centre and the EAZA Animal Welfare Working Group explored how a balance between population management and animal welfare goals can be reached through the integration of different expertise that is already available within our community.

This was also an opportunity for the WAZA Committee for Population Management (CPM) to meet and continue discussions about the International Studbooks, and the Global Species Management Plans (GSMPs), among other matters.

The 3rd Joint TAG Chairs meeting offered a unique opportunity to meet counterparts from different regions. WAZA, AZA and EAZA extended travel grants to support 33 participants from different continents.

Planning has already begun for the 4th Joint TAG Chairs meeting, which will return to the United States in 2020. WAZA and its partners will provide updates as details are confirmed.

Group picture of participants.
© Mirko Marseille – EAZA Executive Office
WAZA welcomed five new institutional members to its nearly 400-strong membership base, in 2018, following a one-year pause on new membership applications. WAZA is pleased to welcome Kyoto City Zoo, Yorkshire Wildlife Park, Bergen Aquarium, Tennessee Aquarium and Johannesburg Zoo to the WAZA family. The five institutions will be the first of many as WAZA expands its membership base.

Kyoto City Zoo was founded in 1903 and is the second-oldest zoo in Japan, and the first in Japan to be funded largely by donations from local citizens. The zoo is an active participant in species conservation projects, breeding and caring for animals at risk of extinction. The zoo, in cooperation with Kyoto University, established the Center for Research and Education of Wildlife (CREW) in 2013. Kyoto City Zoo is also a member of the Japanese Association of Zoos and Aquariums (JAZA).
Introduction of New WAZA Members

Yorkshire Wildlife Park, in the United Kingdom, opened in 2009 with a mission to focus on animal welfare as well as conservation and education. The park is committed to link ex situ conservation to in situ conservation with research and financial support. The Yorkshire Wildlife Park Foundation is a registered charity and supports many conservation projects, such as working with Polar Bears international and the IUCN Climate Change Specialist Group for polar bear conservation. The park works with animal welfare organisations across Asia to help improve animal welfare in zoos and sanctuaries across the continent. Yorkshire Wildlife Park is also a member of the British and Irish Association of Zoos and Aquariums (BIAZA) and the European Association of Zoos and Aquaria (EAZA).
Bergen Aquarium is the biggest aquarium in Norway and is one of Bergen’s biggest tourist attractions. The aquarium opened in 1960 and has undergone changes over the past couple of years, including the development of new exhibits. The aquarium participates in educational programmes for schools and hosts many kindergartens during the year. Bergen aquarium has a strong focus on marine litter and highlights the issue through its education exhibits. The aquarium is also a member of EAZA.
The Tennessee Aquarium, United States of America opened in 1992 with a mission to connect people with nature and empower them to make informed decisions about water and wildlife. The aquarium celebrates the rich biodiversity of the south-eastern United States and is actively engaged in preserving and restoring the local biodiversity through its work in the field. The aquarium’s research arm, the Tennessee Aquarium Conservation Institute, is focused on restoring freshwater ecosystems and helping people appreciate the need for environmental health in their region. The Tennessee Aquarium is also a member of the Association of Zoos and Aquariums (AZA).
The Johannesburg Zoo in South Africa was established in 1904 and is home to 1,800 animals and 320 species. The Zoo’s vision is to be recognised as the Gauteng province’s environmental and wildlife destination of choice through conservation, recreation, education and research. In the early 2000s, the zoo redeveloped many of its enclosures to meet international standards. Johannesburg has received international recognition for its wattled crane and amphibian conservation programmes, and earlier this year reintroduced 200 endangered Pickersgill’s reed frogs back into the wild. The Zoo has an off-site facility in the Free State of South Africa, where it intends to establish a wattled crane breeding and conservation facility. Johannesburg Zoo is also a member of the Pan-African Association of Zoos and Aquaria (PAAZA).
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